ABSTRACT OF THE DISCLOSURE

A power management architecture for an electrical power distribution system, or portion thereof, is disclosed. The architecture includes multiple intelligent electronic devices ("IED's") distributed throughout the power distribution system to manage the flow and consumption of power from the system using real time communications. Power management application software and/or hardware components operate on the IED's and the back-end servers and inter-operate via the network to implement a power management application. The architecture provides a scalable and cost effective framework of hardware and software upon which such power management applications can operate to manage the distribution and consumption of electrical power by one or more utilities/suppliers and/or customers which provide and utilize the power distribution system. Autonomous communication on the network between IED's, back-end servers and other entities coupled with secure networks, themselves interconnected, via firewalls, by one or more unsecure networks, is facilitated by the use of a back-channel protocol. The back-channel protocol allows a device coupled with a secure network to solicit communications from a device on the unsecure network, thereby opening a back-channel through the firewall through which the unsecure network device may send unsolicited messages to the secure network device. Communications between multiple secure networks is accomplished using a unsecure device on an intermediary unsecure network to relay communications between the secure network devices using the protocol described above.